

**What is claim is**

1. A light source of an optical encoder, the optical encoder having an optical detector with a plurality of light receiving surfaces and an encoder wheel intermittently blocking a light from the light source, the light source  
5 comprising:

at least one light-emitting diode;

a package casing; and

a collimating unit with lenses corresponding to the light receiving surfaces.

10 2. The light source of an optical encoder as in claim 1, wherein the collimating unit is one-piece formed formed with package casing.

3. The light source of an optical encoder as in claim 2, wherein the lenses are plane-convex lenses.

15 4. The light source of an optical encoder as in claim 2, wherein the lenses are double-convex lenses.

5. The light source of an optical encoder as in claim 1, wherein the collimating unit is assembled on the package casing.

6. The light source of an optical encoder as in claim 5, wherein the lenses are plane-convex lenses.

20 7. The light source of an optical encoder as in claim 5, wherein the lenses are double-convex lenses.

8. The light source of an optical encoder as in claim 1, wherein the number of light-emitting diodes corresponds to the number of the light receiving surfaces.

9. A light source of an optical encoder, the optical encoder having an optical detector with a plurality of light receiving surfaces and an encoder wheel intermittently blocking a light from the light source, the light source comprising:

- 5           at least one light-emitting diode;  
            a package casing; and  
            a collimating unit with openings corresponding to the light receiving surfaces.

10          10. The light source of an optical encoder as in claim 9, wherein the collimating unit is one-piece formed with package casing.

11. The light source of an optical encoder as in claim 9, wherein the collimating unit is assembled on the package casing.

15          12. The light source of an optical encoder as in claim 9, wherein the number of light-emitting diodes corresponds to the number of the light receiving surfaces.